The effect of governance mechanism and structure on fees and performance of Mutual Funds in Canada

By

Deepak Singh, BE (Electronics and Communication), MBA

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Faculty of Business, Brock University

St Catharines ON

Canada L2S 2A1

ABSTRACT

Taking advantage of the unique Canadian setting, this study empirically analyzes the impact of presence of the board of directors, as an internal governance mechanism, on fees and performance of mutual funds. Further, the impact of the board structure on fees and performance of corporate class funds is analyzed. We find that corporate class funds, which have a separate board of directors for the fund, charge higher fees; however, they also provide superior performance than trust funds. Furthermore, we find that for corporate class funds, smaller board, with higher percentage of independent directors, and with the fund CEO acting as the chairman of the board is likely to charge lower fees. Also, more independent boards are strongly associated with superior fee-adjusted performance.

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1. Introduction

Canadian Foundation for Advancement of Investor Rights (FAIR Canada) in a recent open letter (Pascutto, 2011) to the Canadian Finance Minister, James M. Flaherty, wrote "FAIR Canada urges you to include (in the Senate National Finance Committee) an examination of the high cost of owning mutual funds for Canadians compared to Americans. Canadians have a significant amount of their wealth invested in mutual funds and similar financial products, with approximately $620 billion invested in mutual funds alone. Many studies have shown that Canadian funds have significantly higher costs than their US counterparts". The Senate committee was commissioned by the finance minister to investigate why Canadians pay higher than Americans for similar consumer products in the two countries. The office of the finance ministry has now decided to add the investigation on cost of owning mutual funds to its mandate as well.

The Canadian media has been widely reporting about the high level of mutual fund fees in Canada. In a recently released report on global funds, Morningstar gave Canada an F grade in fees and expenses category (Morningstar, 2011). With a median average asset weighted expense ratio (MAAWER) of 2.31% for equity funds, Canada has earned the dubious distinction of being the country with highest mutual fund fees amongst the countries studied. On being compared to its neighbor US, which has a MAAWER of only .94%, the mutual fund industry defended its more than double fee levels by quoting lower economies of scale in Canada, higher taxation, and integrated advisory fees amongst other reasons. Although the claim about higher taxation does hold ground, however it doesn't explain the large magnitude of differences. Also, lower economies of scale claim doesn't hold when one compares Canada's fees to smaller markets like Belgium (1.49%), Sweden (1.42%), Australia (1.16%), etc. In her cross country study on expense ratios in North America, Ruckman (2003) finds that only 24% of fee discrepancy is explained by lack of competition and lower economies of scale. The argument about integrated advisory fees leading to higher fees is also not valid since the same fund purchased online costs the same as it does when one buys it from the advisor. Therefore, a large part of the discrepancy remains unexplained.

Mutual funds in Canada can be either organized as a trust (Trust Funds) or a corporation (Corporate Class Funds). The two structure have very different governance mechanisms. The Canadian Mutual industry provides a unique setting where two governance structures are

operating simultaneously in one industry. In a joint federal study conducted by the Canadian Securities Administrators (CSA) and the Canadian Council of Insurance Regulators (CCIR), the regulators acknolwdged that for Canadian mutual funds, governance mechanism was not uniform at all (A Comparative Study of Individual Variable Insurance Contracts (Segregated Funds) and Mutual Funds, 1999). The trust funds are not required to have a separate board of directors to oversee the governance of the fund, instead the onus of governance lies in the fiduciary duties of the fund manager. The governance of corporate class funds, like any other corporation, relies on the board of directors representing the interests of the fund holders.

While all the existing studies on mutual fund governance have focused on the impact of various board characteristics on the effectiveness of governance, the unique Canadian environment provides us with an opportunity to test and quantify the effectiveness of board of directors as a governance mechanism. Hence, we address the problem at a more fundamental level. Using 1996-2001 data from British mutual fund industry, which is very similar in structure to Canadian mutual fund industry, Warburton (2010) found that coprporate funds charge higher fees then their trust counterparts. Thus, for doing essentially the same job, corporate fund managers are likely to charge you more. Also, he finds that corporate funds offer superior returns than trust funds.

By analyzing Canadian mutual fund industry data from 2005-2010, we obtain results very similar to Warburton (2010). We find that corporate class funds charge higher fees. We use four measures of cost: management expense ratio, maximum front end load, maximum back end load, and total shareholder cost (defined later). We find that all four measures of fees are higher for corporate class funds as compared to trust funds. Furthermore, we find that corporate class funds generate superior performace than equivalent trust funds. This indicates that the additional fiduciary responsibilities levied upon fund managers in trust funds may lead them to being over cautious and hence, ultimately investing in sub-optimal portfolios, which is then reflected in form of lower returns.

We also go a step further and analyze how various board structure affects effectiveness of governance in corporate class funds. Previous studies have tried to examine a similar link in the US. In their study conducted on open-end funds, Tufano and Sevick (1997) find a strong relationship between boards with effective governance structure and shareholder fees charged by mutual funds. When analyzing closed-end funds, Del Guercio, Dann, and Partch (2003) find that board characteristics associated with board independence are linked with lower expense ratios

and value enhancing restructurings. Kong and Tang (2008) find that unitary boards and smaller board size are more beneficial to investors. Cremers, Driessen, Maenhout, and Weinbaum (2009) analyzed the equity funds and found that Director ownership, both interested and non-interested, has significant implications for mutual fund performance and fees.

We find that smaller board size, presence of Chief Executive Officer (CEO) duality i.e. the fund CEO is also the chairman of the board, and higher representation of independent directors are associated with lower fees. Furthermore, we find that smaller board size is strongly linked with superior fund performance. Hence, our results are largely consistent with the existing literature.

This thesis work contributes to the ongoing debate on the effectiveness of governance structure of mutual funds in Canada. We contribute to fund governance structure comparison literature, started by Warburton (2010), on effectiveness of corporate versus trust form for mutual funds, adding further value by using data from a new country. Also, our study builds upon the work of Tufano and Sevick (1997), Del Guercio et al. (2003), Khorana, Tufano, and Wedge (2007), Kong and Tang (2008), and Cremers et al. (2009) who investigated the link between governance structure and effectiveness of the board. However, all the previous studies have been focused on the US; we add value by analyzing the industry in Canada, which is a very different market in terms of structure, culture, and regulatory environment. By investigating and emperically comparing the different governance mechanisms, we contribute to the stewardship theory literature by demonstrating the existence steward-principal type of relations in case of trust funds in Canada.

The rest of the thesis is oraganised as follows: Section 2 provides the institutional background on the mutual funds market and governance in Canada; Section 3 contains literature review and hypothesis development; Section 4 describes the data and methodology used; Section 5 provides results for analysis of board as an internal governance mechanism; Section 6 provides results for analysis of impact of board structure on fees and performance of corporate class funds; Section 7 concludes.

2. Background

2.1 Mutual Funds market in Canada

Mutual funds market in Canada is unique in terms of choices available to investors with respect to the structure of mutual funds[1]. Depending upon how it is organized, structurally and legally, a mutual fund may either be a trust fund, or a corporate class fund. Regulation of mutual funds is under provincial jurisdiction and the provincial regulators together form the Canadian Securities Administrators (CSA) to provide a streamlined and standardized regulatory framework for mutual funds in Canada. In June 2011, there were 6839 mutual funds in Canada offered by 157 families with $963 Billion worth of net assets under management.

Mutual fund trusts are the traditional and the most common form of mutual funds in Canada. In this structure, investors buy units of the trust and the trust invests the funds in accordance with its investment objectives. The unit holders can redeem their investment by returning the units back to the trust at the Net Asset Value (NAV) per unit, which varies daily as per the changes in prices of the securities the fund holds. Also, when an investor redeems his units, he is subjected to capital gains tax on his returns. Since a mutual fund that is organized as a trust is not treated as a corporation, it is not required to have an independent board of directors to monitor the fund management and to represent the interests of the unit holders. Any income that a mutual fund trust earns has to be given back to the unit holders, because if the fund holds the gains, it will have to pay corporate tax on the returns. However, the unit holders pay tax on progressive structure, hence leading to tax savings as compared the previous option. The 142 mutual fund families offered 4564 trust funds with net assets under management of $874 Billion in June 2011.

Corporate funds, which are organized as class of shares of corporation, are relatively new to the Canadian investors. The mutual fund company sets up a corporation and issues shares of the corporation. There are multiple classes of shares, each representing a separate fund. The principal advantage these funds provide is the ability to switch between different funds in the corporation without incurring capital gains tax. Hence, if an investor holds a corporate class fund in a corporation with diversified offering of funds, he can rebalance his portfolio, with changing

[1] Mutual fund is defined here as a pooled investment vehicle which invests in equities, bonds, money market instruments and other such assets, in accordance with its investment mandate.

preferences and market conditions, without having to consider tax implications of shifting to a different fund. However, it is important to note that mutual fund companies, advisors, as well as media have often emphasized that buying and selling mutual funds to time the market is not the appropriate strategy. It is recommended that the investors view mutual funds as a long term investment.

Some experts also argue that while corporate class funds are an efficient vehicle for flow of Canadian dividends and capital gains, they are not so tax efficient for flow of interest and foreign income to the investor (Advisor's Edge, 2003). In the recent times, corporate class funds have gained a lot of popularity with most major mutual fund corporations offering corporate class version of their funds. In June 2011, there were about 2275 corporate class mutual funds with $88.6 Billion net assets, offered by 60 mutual fund corporations.

2.2 Mutual Fund Governance in Canada

One of the first organized studies to be conducted on mutual fund governance in Canada was the 1969 joint provincial and federal study titled *"Report of the Canadian Committee on Mutual Funds and Investment Contracts"*. Substantial growth in the amount of funds invested in mutual funds during 1960s and subsequent concern about lack of proper regulatory framework, led to commissioning of this report (Stevens, 2002). The report described how mutual funds are different from other public corporations and that the laws governing public corporations don't fit well to mutual funds. Hence, there was a need for tailor made legislation. After that, mutual fund governance received major attention due to a series of paper presentations by Stephen Erlichman in 1990s. He discussed about the conflict of interests inherent in the mutual funds. He also discussed examples that indicated weak governance from both US and Canadian mutual fund industries and stressed upon the need for a governance structure for Canada which is similar to *The Investment Company Act (1940)* in US. One of the most prominent recommendation, which was also voiced by others (Stromberg, 1995), was the establishment of an independent governance body to protect the shareholders' interests and to monitor the management. However, in the light of lack of empirical evidence, and criticism by researchers like Pichhadze (2001), the idea of independent board of directors for the mutual funds was put on hold.

The closest that Canadian regulators have got to mandating an independent governance body is the establishment of NI 81-107 (CSA, 2006), which came into force in November 1st 2006. CRA requires the investment funds in Canada to appoint an Independent Review Committee (IRC) to report and provide advice to the fund managers on matters of conflict of interest referred to it by the fund manager. The manager is required to bring any potential incidents to the notice of IRC and seek its advice, which is not binding. Also, IRC is required to annually publish and file a document in which it reports on all the incidents of conflict of interest and how they were handled. This document is available on the fund's website as well as at the online filings repository at the SEDAR website (www.sedar.com) maintained by CSA.

It is a common misconception that the IRC is the Canadian equivalent of board of directors for mutual funds in the neighboring United States. The major role of board of directors, as mandated by SEC, is to represent the interests of the fund holders, monitor fund management, ensure compliance, and negotiate contracts with fund management, marketing, and distribution companies[2]. Among these fiduciary duties, contract negotiation and compliance have been the focus of recent research on mutual fund governance. The IRC on the other hand, is required to provide advice to the managers on the matters referred to it. The IRC plays no role in negotiating contracts, and hence, fees. Also, IRC has no authority vested upon it to represent the interests of the fund holders or to influence management decisions.

Cowdery (2006) suggests that the mutual fund governance in Canada is mainly based on manager's fiduciary obligations, disclosure, accountability, and investor rights. The fund managers have fiduciary duty to competently manage their funds in the best interests of the investors. Mutual funds are required to disclose all material information, in form of a simplified prospectus and annual information form (on request), to facilitate an informed decision at the time of sales. Mutual funds are also needed to disclose their performance on an on-going basis through annual and semi-annual financial statements, management report of fund performance, and proxy disclosure. Funds also release a quarterly portfolio disclosure. All of these disclosure documents are available on the fund's website and are sent to investors' address on request as well. In a recent study on mutual funds globally, Morningstar gave Canada a B+ in disclosure standards, only behind US and Sweden (Morningstar, 2011). CSA has recently proposed changes in which it will allow mutual fund companies to deliver fund facts document (a document that sets out the key features of a mutual) after the sale of funds. This defeats the purpose of the

[2] See Tufano and Sevick (1997) for a more detailed discussion on role of Board of directors of mutual funds in the United States.

document which is currently required to be submitted to the potential investor prior to sale in order to aid his decision making process. This may lead to deterioration in Canada's disclosure environment in the future.

The mutual funds are required to disclose the name of portfolio managers as well as their dealers. The fund manager is held accountable for the continuous disclosure and for contents of the prospectus. Also, the sales process of mutual funds is regulated and fund-based sales contests are not allowed in Canada. Fund investors have the right to: redeem their investment at the current market value, to be informed of any material changes to the fund, to vote on enumerated proposals like increase in fees, and change in manager, change in auditors, change in investment objective, and fund mergers. The regulators also review the prospectus and on-site compliance on a time to time basis. Theoretically, investors can also penalize an inefficient manager by redeeming their investment in the fund and moving it to some other fund. However, the taxes and fees associated with withdrawal of invested funds make it difficult to do so.

3. Literature review and hypothesis development

The relevant literature for our study falls into two main categories: stewardship theory and agency theory, and mutual fund governance. We start with a brief review of agency theory, followed by review of the relatively new stewardship theory. Finally we review the literature related to governance structure of mutual funds and then formulate our hypotheses.

3.1 Agency Theory

The literature on agency theory is mainly based on the assumption of rational man who acts to maximize his or her utility (Jensen & Meckling, 1976). A modern corporation consists of two parties: agents and principals. The stockholders of the corporation are the principals who hire managers to manage the firm on their behalf (Fama, 1980). Now, both agents and principals are entering into this contract to maximize their individual utilities (Davis, Schoorman, and Donaldson, 1997). The shareholders hire the management because they believe that the management can run the company on their behalf and provide highest possible returns on their investment. The managers accept the offer as they believe that this assignment provides highest

utility as compared to other available opportunities. However, it is important to note here that their utility functions are not aligned and hence, the utility maximizing behavior by the manager (agent) may not maximize the utility for the shareholders (principal). This conflict of interests, inherent in the structure of firms, has been at the heart of agency theory. The principals may like to eliminate this problem by managing the firm themselves. Unfortunately, given the large size and capital requirements of modern corporations, it is impossible to do so (Berle & Means, 1932). As a result, there is a need for mechanisms to control wayward managerial behavior.

There can be two types of control mechanism: internal and external. External mechanisms like acquisition, divestures, and ownership amendments are useful in controlling self-serving managerial behavior, when internal mechanisms fail to do so. However, they are much more expensive than internal mechanisms and hence, not preferred by the principals (Walsh & Sevard, 1990). The two most common internal mechanisms are alternative executive compensation schemes and governance structures (Davis et al, 1997). Alternative executive compensation schemes mechanism requires that the management compensation system be designed such that it aligns the management rewards with shareholder objectives by tying their compensation with long-term firm performance. Employee stock options, deferred compensation, variable pay, etc. are the most commonly used tools in this category.

In the second internal mechanism, a governance body like board of directors is used to communicate the shareholders' interests to the management and to monitor manager behavior (Davis et al, 1997). Agency theorists believe that outside board leadership and membership is essential for proper control and oversight (Davis et al, 1997). Governance structures serve to minimize the costs associated with the modern corporate structure where different functions of the organization are managed by specialists (Williamson, 1985).

The model of a rational and opportunistic man, which is at the heart of agency theory, has been criticized by many researchers (Davis et al (1997)). It is argued that a man's actions are not always driven by opportunism and there are situations in which some other factors may be guiding his actions. There is a need for a theory which considers the humane aspect of managers, hence, the stewardship theory.

3.2 Stewardship Theory

Contrary to agency theory, stewardship theory views the managers as stewards of the organization who derive more utility from organizational and collective achievements than individual achievements (Davis et al, 1997). Stewards prefer organizational goals to individual goals, however, this preference is not irrational as they gain more utility by pursuing the organizational goals and hence, the principals' goals. Therefore, stewards are trustworthy and they work hard to achieve the organizational goals (Donaldson & Davis, 1994).

Stewardship theory suggests that, provided the steward is getting a salary/ compensation necessary for his survival, the steward will always choose to pursue organizational goals over personal goals. This happens because the steward strongly believes that the achievement of organizational goals will also lead to the achievement of his personal goals. He links the success or failure of the organization to his personal success or failure. He will rejoice and take pride in an organizational achievement in the same manner as he would do in case of a personal achievement. The steward not only takes credit, but also takes a personal blame for an organizational failure. Therefore, the steward will not increase his personal utility at the cost of organizational goals or principals' utility. Hence, in such a setup, the principals need to trust and empower the stewards in order to maximize their own utility, rather than trying to monitor and control them. Therefore, under a stewardship regime, the job of board of directors is support and enable rather than monitor and control.

Davis et al. (1997) suggest that rather than questioning whether stewardship theory or agency theory is applicable in a given situation, one should understand that there are external and internal factors affecting the managers that will determine whether they act as agents or stewards. Internal factors like motivation, identification and use of power, along with external factors like management philosophy, power distance and culture, are important determinants of whether stewardship theory will apply.

Managers motivated by intrinsic factors are much more likely to act as stewards rather than those who need external motivation. A person who has a strong need for achievement and recognition, and aspires to reach a stage of self-actualization, is a likely candidate for being a steward. An agent on the other hand would need tangible and measurable extrinsic rewards to be motivated to perform well. Hence, stewards aspire for achievement of higher order needs, whereas agents aspire for fulfillment of lower order needs.

Managers who are stewards identify themselves with the organization, treat organization's success and failures as their own, and take comments directed towards the organization as personal. However, a manager whose self-image and concept of self is not affected by the organization is more likely to act as an agent.

Stewards derive their power through their personal relations and expertise, whereas agents depend upon organization position to derive power. Organizational power is easy to obtain, however, it is not easy to maintain it in the long run. Personal power on the other hand, which is the preferred source of power for stewards, requires managers to invest time in building relations and earning respect by demonstrating expertise.

Along with the personal characteristics of the managers, the management philosophy prevalent in the organization also plays an important role in determining whether mangers act as stewards or agents. If the management believes in keeping a tight control and not providing a lot of scope for flexibility, agency behavior will dominate. On the other hand, empowered managers, who are given flexibility to make independent decisions based on their judgment, are more likely to become trusted stewards. Also, if the organization is based in a low power distance culture, there will be more trust and clarity in communications, leading to a prevalence of stewardship. Finally, managers in a collectivist culture are more likely to be stewards than the managers working in a culture where individualistic goals and achievements are given preference.

3.3 Mutual Fund Governance

With respect to the existing literature on comparing two forms of mutual funds, Warburton (2010) analyzes mutual fund industry in Britain and found that corporate funds are associated with higher fees, and at the same time, they offer superior returns. However, Warburton (2010) doesn't analyze the structure of board of directors in corporate funds; neither does he look at the possible impact of board structure on fund fees and performance.

Most of the initial researchers investigating the impact of structure of board of directors had focused mainly on the corporate. Weisbach (1988), Byrd and Hickman (1992), Brickley, Coles, and Terry (1994), and Cotter, Shivdasani, and Zenner (1997) find a positive relationship between board independence and performance. Baysinger and Butler (1985), Hermalin and Weisbach (1991), and Bhagat and Black (2002) find no relation. Molinari, Morlock, Alexander, and Lyles

(1998), Klein (1998) on the other hand found that board independence had a negative impact on firm performance. Yermack (1996) found that smaller boards are linked with better firm performance. Hermalin and Weisbach (1991) also find a positive relationship between director ownership and board effectiveness.

However, in the recent times mutual fund boards have also been getting considerable academic attention. Tufano and Sevick (1997), Del Guercio et al. (2003), and Cremers et al. (2009) find that board independence is related to lower fees. Kong and Tang (2006) find that boards with more than 75% independent directors do charge lower management fees, however, the overall fees charged by funds is higher for more independent boards.

Kong and Tang (2006) also find that more independent boards have higher likelihood of being involved in trading scandals. Khorana, Tufano, and Wedge (2007) find that a board consisting of all independent directors is more likely to initiate value enhancing fund mergers. All of these studies consistently confirm Yermack (1996)'s findings that smaller boards are more effective boards. Cremers et al. (2009) find that director ownership is positively related to fund performance and non-independent director ownership is also strongly positively related to lower expense ratios.

Tufano & Sevick (1997) find that relatively higher paid independent directors approve higher shareholder fees. Del Guercio et al. (2003) find that funds with low expense ratio have relatively low director compensation. Chen, Goldstein, and Jiang (2008) find that director ownership is positively correlated with director compensation. Cremers et al (2009) find that director compensation is positively related to abnormal returns. While Del Guercio et al. (2003) find no significant impact of presence of unitary boards, Kong and Tang (2006) find that unitary boards charge lower fees, are more likely to pass on the savings associated with economies of scale, are less likely to be involved in trading scandals and have a high stewardship rating.

Brickley, Coles, and Jarell (1997) found that CEO duality can help firms in making timely and optimal decisions. Later studies on corporate have found that CEO duality is associated with higher CEO compensation (Core, Holthausen, & Larcker, 1999) and lower board independence (Ghosh & Sirmans, 2003).

3.4 Hypothesis Development

Study One: Board of directors as an internal governance mechanism

Canadian mutual fund industry provides us with the unique opportunity to examine the impact of presence of board, in terms of effectiveness of governance, which can be measured directly via its impact on fees and performance. Also, such a comparison will be free of any country bias. Existing researchers have implicitly assumed that the board represents and protects the interests of the investors and hence, we also expect the presence of the board to be associated with more effective governance. Hence, we develop our hypotheses as following:

$H1^F$: Presence of the board is negatively related to fund fees.

$H1^P$: Presence of the board is positively related to fund performance.

The superscripts "F" and "P" refer to hypotheses for fees and performance, in that order.

Study Two: Impact of board structure on fees and performance of corporate class funds

We can have two set of hypotheses for each board structure variable, one under agency theory and the other under stewardship theory. The two hypotheses might not be necessarily different/ opposite to each other for all variables. There are cases when agency and stewardship theory will have similar expectations in terms of effect of a variable on board effectiveness. Hypotheses under agency theory are identified with a subscript of "*a*" in hypothesis number (e.g. $H1_a$), similarly a subscript "s" is used for hypotheses developed under the assumptions of stewardship theory. In case of both theories leading to same expectations, the subscripts are dropped.

Board Size

It is well documented in corporate[3] as well as mutual fund literature[4] that smaller boards are positively related to board effectiveness. Large boards make it difficult for the board to be effective, as team dynamics have a tendency to take over objectivity. Consistent with the previous studies, we expect board size to be inversely related to board effectiveness, irrespective of the mediating theory. Therefore, we hypothesize the following:

$H2^F$: Size of the board is directly proportional to fund fees.

$H2^P$: Size of the board is inversely proportional to fund performance.

CEO Duality

As per agency theory, board independence is very important for effective functioning of the board. CEO duality refers to the same person acting as the CEO of the organization (the fund management company in case of corporate funds), as well as the chairman of the board. According to agency theorists, Boards are meant to function as monitoring body aligning CEO and shareholder objectives (Fama & Jensen, Separation of Ownership and Control, 1983). CEO duality directly stands against the basic ideology of agency theory, as the board which is there to monitor the management is headed by the same person who is the head of management. Hence, the CEO will be responsible for monitoring his own behavior. Agency theory suggests that this would strongly weaken the board effectiveness. Core, Holthausen, & Larcker (1999) find that CEO duality is associated with higher CEO compensation. For Real Estate Investment Trust funds in the US, Ghosh & Sirmans (2003) find that board independence is reduced by CEO duality.

On the other hand, Stewardship theory argues that this provides the CEO with unambiguous leadership of the organization and he can function and perform better in the interest of the shareholders. Brickley, Coles, & Jarell (1997) provide evidence that CEO duality can help firms in making timely and optimal decisions. Therefore, we hypothesize the following:

$H3_a^F$: CEO duality is positively related to fund fees.

$H3_s^F$: CEO duality is negatively related to fund fees.

[3] Yermack (1996)
[4] Tufano and Sevick (1997), Del Guercio et al. (2003), Kong and Tang (2008), and Cremers et al. (2009)

$H3_a^P$: CEO duality is negatively related to fund performance.

$H3_s^P$: CEO duality is positively related to fund performance.

Board Independence

A lot of stress has been laid upon the importance independence of the board of directors by academics as well as regulators. In 2003, SEC passed a rule required mutual fund boards to have at 75% independent members, up from the initial 50% requirement. Tufano and Sevick (1997), Del Guercio et al. (2003), and Cremers et al. (2009) found that more independent boards are more effective in executing their fiduciary duties. Kong and Tang (2008) found opposite relationship for the overall fees charged by the funds. Agency theory suggests that if more insiders are on the board, the board will not be effectively able to perform its monitoring and control function. This is rooted in the fundamental belief that insider directors will prioritize their own utility over fund investors' utility and hence, would not be effective in their governance role.

Stewardship theory views the larger representation of insiders on the board as a positive event. The insider directors are seen as trust-worthy employees of the organization who will work to prioritize organizational goals over personal goals. Also, if a board is dominated by independent directors, they will have little interest in overseeing the fund management as they don't have an affiliation and good understanding of the fund. Therefore, we hypothesize the following:

$H4a^F$: Percentage of independent directors on the board is inversely proportional to fund fees.

$H4_s^F$: Percentage of independent directors on the board is directly proportional to fund fees.

$H4_a^P$: Percentage of independent directors on the board is directly proportional to fund performance.

$H4_s^P$: Percentage of independent directors on the board is inversely proportional to fund performance.

Board Diversity

Various previous researchers have explored diversity in workforce and boardrooms' relation to firm value. Robinson & Dechant (1997) suggest that diversity helps firms by helping them in: better understanding the market, increasing creativity and innovation, more effective problem solving, increasing the effectiveness of top management, and making them more culturally sensitive. Carter, Simkins, & Simpson (2003) find a significant positive relationship between fraction of women or minorities on the board and firm value. Adams & Ferriera (2009) find that female directors have significant impact on board inputs and firm outcomes. They also find that gender diversity has positive impact on board attendance and monitoring. Also, diverse boards are more likely to initiate CEO removal following poor performance. However, they find that overall impact of diversity on firm value is negative. Simpson, Carter, & D'Souza (2010) found mixed evidence regarding the presence of women on board. We do not have clear expectations regarding the impact of boardroom diversity on mutual fund governance. Hence, we formulate our hypotheses as following:

H5^{F}: Percentage of women on board is negatively related to fund fees.

H5^{P}: Percentage of women on board is positively related to fund performance.

4. Data Description and Methodology

4.1 Sample selection

We start by collecting the fees and performance data for entire mutual fund universe in Canada (Trust funds and Corporate Class funds) from Globe Hysales Canada for a period of 6 years from 2005-2010. The initial data consisted of 27,624 funds offered by 227 families with $4.81 Trillion worth of net assets under management.

These funds also included some labor sponsored funds, segregated funds and some hedge funds which were misclassified as corporate class funds. Also, for some trust as well corporate class funds, both return and expenses information was missing. Such funds were removed from the sample.

Governance data for six years (2005-2010) for the corporate class funds was collected manually from the Annual Information Forms (AIF) filed annually at the SEDAR website (www.sedar.com) by the funds. Governance data for five fund corporations were not found in SEDAR, such funds were also removed from the sample. As shown in table 1, the final sample consisted of 26,202 funds offered by 163 families with $4.78 Trillion net assets. Of these 7,180 funds offer by 52 families were corporate class funds with $299.1 Billion net assets.

TABLE A: SUMMARY STATISTICS

Variable	Industry	Corporate Class Funds	Trust Funds
No. of Funds	26,202	7,180	19,022
Net Assets ($M)	4,782,975.5	299,067.6	4,483,907.9
Average Return (%)	5.46	7.27	4.82
Average MER (%)	2.19	2.40	2.11
Average TSC (%)	2.80	3.22	2.64

4.2 Methodology

The following models are used to test all major hypotheses:

$$Fees_{i,t} = \alpha_t + \alpha_j + \alpha_k + \gamma_0\, Board + \gamma_1\, Return_{i,\,t-1} + \gamma_2\, RSP\ Eligibility_{i,t} + \gamma_3\, Log(Fund\ Assets)_{i,t-1} + \gamma_4\, Log(Fund\ Family\ Assets)_{i,t-1} + \gamma_5\, Log(Fund\ Age)_{i,t-1} + \gamma_6\, Log(Funds\ in\ Family)_{i,t-1} + \gamma_7\, Log(Manager\ Tenure)_{i,t-1} + \gamma_8\, Fund\ Turnover_{i,t-1} + \gamma_9\, Log(Min\ Initial\ Investment)_{i,t} + \gamma_{10}\, Standard\ Deviation_{i,t-1} + \gamma_{11}\, Net\ Asset\ Value_{i,t-1} + \gamma_{12}\, Index\ Fund\ dummy_{i,t} + \varepsilon_{(i,t)} \quad (1)$$

$$Return_{i,t} = \alpha_t + \alpha_j + \alpha_k + \gamma_0\, Board + \gamma_1\, Fees_{i,\,t-1} + \gamma_2\, RSP\ Eligibility_{i,t} + \gamma_3\, Log(Fund\ Assets)_{i,t-1} + \gamma_4\, Log(Fund\ Family\ Assets)_{i,t-1} + \gamma_5\, Log(Fund\ Age)_{i,t-1} + \gamma_6\, Log(Funds\ in\ Family)_{i,t-1} + \gamma_7\, Log(Manager\ Tenure)_{i,t-1} + \gamma_8\, Fund\ Turnover_{i,t-1} + \gamma_9\, Log(Min\ Initial\ Investment)_{i,t} + \gamma_{10}\, Standard\ Deviation_{i,t-1} + \gamma_{11}\, Net\ Asset\ Value_{i,t-1} + \gamma_{12}\, Index\ Fund\ dummy_{i,t} + \varepsilon_{(i,t)} \quad (2)$$

$$Fees_{i,t} = \alpha_t + \alpha_j + \alpha_k + \beta_1\, Board\ Size_{i,t} + \beta_2\, CEO\ Duality_{i,t} + \beta_3 Percentage\ of\ Independent\ Directors_{i,t} + \beta_4 Percentage\ of\ Female\ Directors_{i,t} + \gamma_1\, Return_{i,\,t-1} + \gamma_2\, RSP\ Eligibility_{i,t} + \gamma_3\, Log(Fund\ Assets)_{i,t-1} + \gamma_4\, Log(Fund\ Family\ Assets)_{i,t-1} + \gamma_5\, Log(Fund\ Ag)e_{i,t-1} + \gamma_6\, Log(Funds\ in\ Family)_{i,t-1} + \gamma_7\, Log(Manager\ Tenure)_{i,t-1} + \gamma_8\, Fund\ Turnover_{i,t-1} + \gamma_9\, Log(Min\ Initial\ Investment)_{i,t} + \gamma_{10}\, Standard\ Deviation_{i,t-1} + \gamma_{11}\, Net\ Asset\ Value_{i,t-1} + \gamma_{12}\, Index\ Fund\ dummy_{i,t} + \varepsilon_{(i,t)} \quad (3)$$

$$
\begin{aligned}
Return_{i,t} = \; & \alpha_t + \alpha_j + \alpha_k + \beta_1 \, Board\ Size_{i,t} \\
& + \beta_2 \, CEO\ Duality_{i,t} + \beta_3 Percentage\ of\ Independent\ Directors_{i,t} \\
& + \beta_4 Percentage\ of\ Female\ Directors_{i,t} + \gamma_1 \, Fees_{i,\,t-1} \\
& + \gamma_2 \, RSP\ Eligibility_{i,t} + \gamma_3 \, Log(Fund\ Assets)_{i,t-1} \\
& + \gamma_4 \, Log(Fund\ Family\ Assets)_{i,t-1} + \gamma_5 \, Log(Fund\ Age)_{i,t-1} \\
& + \gamma_6 \, Log(Funds\ in\ Family)_{i,t-1} + \gamma_7 \, Log(Manager\ Tenure)_{i,t-1} \\
& + \gamma_8 \, Fund\ Turnover_{i,t-1} + \gamma_9 \, Log(Min\ Initial\ Investment)_{i,t} \\
& + \gamma_{10} \, Standard\ Deviation_{i,t-1} + \gamma_{11} \, Net\ Asset\ Value_{i,t-1} \\
& + \gamma_{12} \, Index\ Fund\ dummy_{i,t} + \varepsilon_{(i,t)}
\end{aligned}
$$

(4)

The models are fitted using pseudo maximum likelihood method and we estimate robust standard errors at fund cluster level. We control for three types of fixed effects: year effect (α_t), investment category effect (α_j), and investment style effect (α_k). The funds are classified into are 48 investment categories. Investment style has two components: equity style and fixed income style. Equity style can either be blend, growth, sector, value, or not applicable. Similarly, fixed income style can either be blend, rate anticipate, spread, or not applicable. *Board* is a dummy variable, which is set as one for corporate class funds and zero for trust funds.

Board size is defined as the number of members in the board of directors for the fund. CEO duality is binary variable which is set to one if CEO is also the chairman of the board, and zero otherwise. Board independence is defined as the percentage of outsiders sitting on the fund board. Board diversity is measured by percentage of women on the board.

Consistent with Khorana, Servaes, & Tufano, Mutual Fund Fees Around the World, (2008), fees are measured by Management Expense Ratio (MER) as well as Total Shareholder Cost (TSC), assuming a holding period of five years. TSC is obtained by adding MER and annualized front end and back end loads. MER is the sum of management fees, marketing and administrative costs, brokerage fees, trailer fees, and taxes. Back end loads are used to encourage investors to not withdraw their investment from the fund in short time and to stay invested for a longer period. The annual structure of back end loads was not available to us through our data, however, only a maximum backend load was provided. We have assumed that the back end load decreases by 1% every year and for a 5 year holding period, the backend load would reduce by 5% from its

maximum value. In absence of actual holding period data and back end load annual structure, TSC is a close approximation to the actual shareholder cost.

5. Board of Directors as an internal governance mechanism

The objective of governance in mutual funds is to protect the interests of the investors. Therefore, a good governance mechanism should lead to lower fees and better returns for the investors, amongst other things. Various studies have tried to analyze the impact of various board characteristics on governance effectiveness[5]. All these studies have considered board of directors as the only internal governance mechanism choice, as is the case in the United States mutual fund industry, on which most the studies are based. However in Canada, since we have two internal governance mechanisms operating simultaneously, we can empirically test the effectiveness of board of directors as a governance mechanism by comparing trust funds with corporate class funds, which can help us in drawing significant inferences.

A similar study has been done on British mutual funds comparing the trust versus corporation structure, which found corporate to be superior structure for investors in term of returns net of fees[6]. Warburton (2010) uses survivorship bias free returns and fees data from 1996-2001 for the British mutual funds industry to compare the two competing organizational structures, or governance mechanisms. He found that trust funds charge lower fees than corporate funds, even after controlling for other factors. Also, he found that corporate funds produce higher risk adjusted returns than trust funds. He concludes by recommending investors to invest through corporate funds rather than trust funds.

For our study, we use the most recent six year data (2005-2010) to compare the corporate structure to the trust structure and hence, drawing inferences about the governance mechanisms. As shown in table 2 in appendix, over the six year observation period, corporate class funds provided an average return of 7.27%, whereas for the trust funds it stood at 4.82%, a statistically significant difference of 2.45%. If we look at the fees, the Management Expense Ratio (MER) for corporate class funds averaged at 2.40%, at the same time, the trust fund's MER averaged 2.11% - a difference of 29 basis points. However, we observe that this difference has been shortening

[5] See Cremers, Driessen, Maenhout, & Weinbaum (2009), Sophie Xiaofei & Dragon Yongjun (2008), Del Guercio, Dann, & Partch (2003), Ghosh & Sirmans (2003), etc.
[6] See (Warburton, 2010)

with the fees for trusts and corporate slowly converging, and the overall fees have also been witnessing a decreasing trend as shown in figure 1:

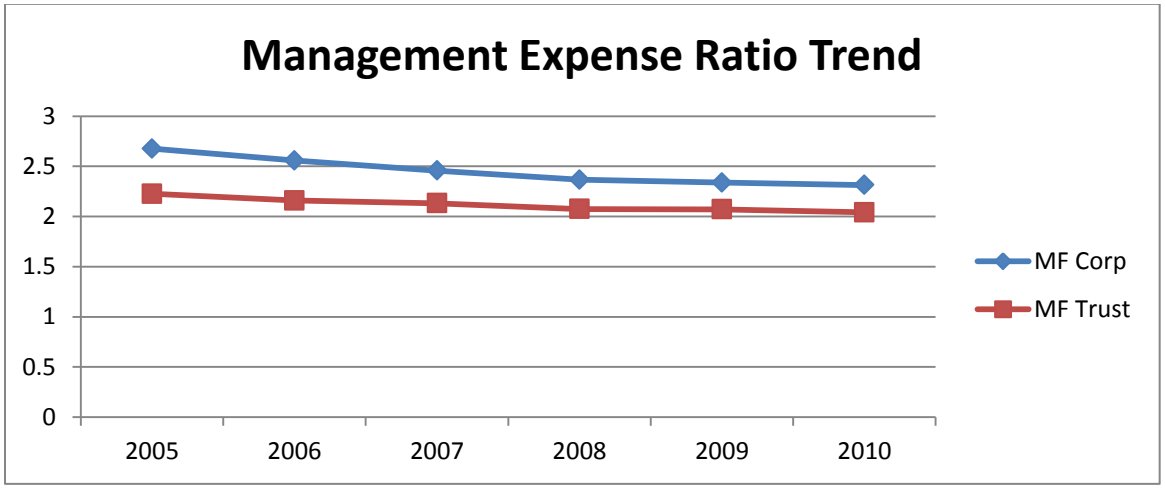

FIGURE 1: A CONVERGENCE IS SEEN IN MERS OF MF CORPORATIONS AND MF TRUSTS, WITH THE OVERALL FEE ALSO WITNESSING A DOWNWARD TREND

We can also analyze this difference by looking at the total cost of holding the funds. Average TSC for corporate class and trust funds is 3.22% and 2.64%, respectively, leading to an even larger difference of 58 basis points. Therefore, we see that even though corporate class funds provide superior returns, they also charge considerably higher fees. It will be interesting to see if these differences in fees and return for the Canadian mutual fund industry remain significant when we control for various factors affecting fees and returns, as shown in equation (1) and equation (2).

If a fund is eligible for Retirement Savings Plan (RSP), it provides investors the opportunity to lower their tax bill by making deductible contributions to the RSP eligible fund and also, the gains on RSP account are not taxed until they are withdrawn (RSP or Retirement Savings Plan for Canadians - RBC Direct investing, 2011). Hence, RSP eligible funds should be able to charge higher fees. Since RSP eligible funds can invest in a variety of asset classes, the impact on returns is not clear. The larger the net asset size of the fund and the fund family, the larger should be the savings in terms of economies of scale. The funds may pass these as lower fees for the investors. Also, a larger fund/ family might have access to better information and analysis leading to better investment decision, translating into higher returns. At the same time, larger funds may charge investors a premium for the brand and hence, push the fees up and

returns down. Also, the impact of change is net asset size is expected to decrease with size[7]. Hence, we take a log fund assets and fund family assets. Similarly, we also control for fund's age, taking the log of fund's age in years. Funds with longer manager tenure, measured in years, may lead to higher returns and higher fees.

Funds with higher turnover, measured as % of portfolio, indicate higher trading, which should translate in to higher trading costs. At the same time, with higher trading managers may be able to generate superior returns, if they are able to act timely on useful information. Minimum Initial Investment, measured in dollars, is an indicator of the target investors for the fund. Funds are likely to charge lower fees from large institutional investors as compared to retail investors. Standard deviation is an indicator of the volatility and risk associated with the fund. Higher returns are expected from the funds with higher standard deviation. Higher returns expectation should also allow funds to charge higher fees. Net Asset Value (NAV) also indicates about the kind of investors buying the funds at various price points. Finally, index funds don't need to be managed as actively as other funds and hence, this should lead to lower fees.

From our sample, we observe the average corporate funds, with net assets of $57.1 million, are much smaller than trust funds, with average net assets of $301.7 million. On the other hand, the average net assets of the fund family are not very different for the two types of funds. Corporate class funds are offered by families with larger number of funds as compared to trust funds (refer Table 3 for more details). This indicates a trend where large families offer corporate class funds, but however, each fund is not of size comparable to average trust fund. Therefore, smaller fund size may push the MER up for corporate class funds. Trust funds are managed by more experienced managers, with an average tenure of 6.6 years, as compared to corporate class funds where the manager has an average tenure of 4.8 years. This is not surprising since the market share for corporate class funds has been on the rise over the six year period and many new corporate class funds are coming up.

Fund turnover and NAV for the two types of funds are also not significantly different. The median minimum initial invest for the funds is same as the industry at $500. Corporate class funds are more risky with a standard deviation of 13.43% as compared to a standard deviation of 11.52% for trust funds.

[7] (Khorana, Servaes, & Tufano, Mutual Fund Fees Around the World, 2008)

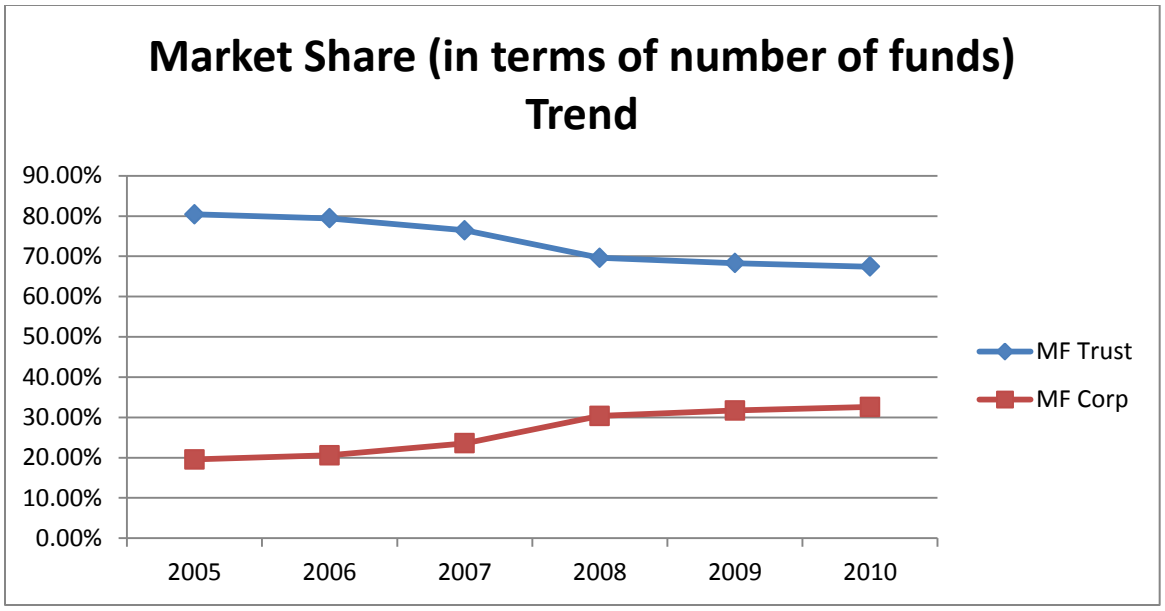

FIGURE 2: PERCENTAGE OF FUNDS WHICH ARE ORGANIZED AS A CORPORATE CLASS HAS BEEN RISING OVER THE OBSERVED SIX YEAR PERIOD, INCREASING FROM 19.6% IN 2005 TO 32.6% IN 2010

Results

Mutual Fund Fees Analysis

One of the measures to test effectiveness of any governance mechanism is to compare the fees charged by the funds under the two systems. Previous researchers analyzing US data have separated the various components of fees: management fee, 12b-1fees, and other administrative expenses[8]. However, in case of Canadian data, only overall management expense ratio (MER) is provided. MER includes management fee, marketing and administrative costs, brokerage fees, trailer fees, and taxes. Further, we have the data available for maximum front end and back end loads. Also, consistent with previous researchers, we have also defined a comprehensive measure of holding cost called total shareholder cost (TSC), as defined earlier. By analyzing the impact of presence of board on these four measures of fees, we can make meaningful inferences about the difference in effectiveness of governance mechanism in corporate and trust funds.

We find that the presence of a board has a significant impact on all four measures of fees. Controlling for other variables, corporate class funds charge 11 basis points more in terms of MER (refer table 4). Also, corporate class funds charge higher front end and back end loads. An

[8] See for example Sophie Xiaofei & Dragon Yongjun (2008)

equivalent trust fund would have 104 basis points lower maximum front end load (refer table 5). Similarly, maximum back end loads would be 131 basis points lower for trust funds (refer table 6). The effect of higher front end and back end loads would push the overall cost of ownership even higher and would significant increase the MER difference of 11 basis points between the two types of funds; our results from TSC regression confirm the same. Buying corporate class funds will push the investor's total ownership cost difference to 35 basis points (refer table 7). These results are consistent with the results from the British mutual fund industry, where Warburton (2010) finds trust funds charge 10 basis points lower than their observationally equivalent corporate counterparts.

We also find that the fund's performance in the previous year has negligible to no impact on all four measures of fees. Also, RSP eligible funds charge a premium in terms of higher loads and hence, pushing the TSC 171 basis points higher than funds that are not eligible for RSP. RSP eligibility is very crucial factor for Canadians when they are choosing between various funds. Hence, it is not surprising to find that funds that are not RSP eligible have to pay a penalty in terms of lower fees. Furthermore, large funds charge higher fees, but large families pass on some economies of scale on to the customers in terms of lower fees. Additionally, another observation is that fees charged are lower for funds with high initial investment. These funds are usually targeted towards large institutional investors and hence, due to the large ticket size of the transactions, fund companies charge lower fees as compared to the fees for funds targeted towards retail investors. Finally, index fund charge substantially lower fees as compared to other funds.

Hence, controlling for fund level, family level, and other variables effecting fund fees, corporate funds charge more for the same fund that what a trust fund would charge. Hence, evaluating the effectiveness of governance mechanism by looking at fees, which is inarguably one of the most effective visible indicator of presence of level of agency costs, we conclude the trust structure is a superior form as compared to corporate form. By marketing the ability to switch between funds in the same corporate class family, firms are able to extract a larger premium from the investors. If a difference as large as 35 basis points is justified for ability to switch between funds can be emperically examined by looking at actual fund switching data, which is currently is not available.

Since trust funds are superior than their corporate counterparts, the investments should be expected to flow from corporate funds to trust funds (Warburton, 2010). On the contrary the

market share of corporate class funds has been increasing steadily (see figure 2). The reason for investor's persistence and growing favor with corporate funds can be due to one or more of the following reasons, as suggested by Warburton (2010): 1. High cost of switching from corporate class to trust funds; 2. Lack of awareness amongst common investors about significant differences in fees; 3. Performance differences amongst the two types of funds.

High cost of switching, acting as a barrier preventing the shifting of investments, seems an unlikely factor in the Canadian market where the market share for corporate class funds is actually growing. Lack of awareness can explain some part of this puzzle. If we look closely at the funds sales process in Canada, the relationship established between advisors and retail investors plays a big role. The consumers place high level of trust in advisors in terms of guiding them objectively about the investment options available to them. Back-end and front-end loads reduce the customer's investment by the load amount and that money goes directly to the advisor. Therefore, with corporate funds offering higher loads, and consequently higher income for the advisors, the advisors are more likely to recommend corporate class funds for the investor, even though they may not be most optimum for the client's portfolio. Also, during such discussions, advisors have an incentive to overstate the advantage of switching between funds in the same corporate class family.

The role played by performance in the preference of corporate class funds is examined futher in the next section.

Mutual Fund Performance Analysis

Although investors do care about the fees they pay, it is the after fee performance of the fund that really matters to them, as the after performance will determine what returns they realize on their investments. If as a category, corporate class funds are able to deliver superior performance, the investors will prefer these funds over the trust funds. The results obtained from regressing fee adjusted fund performance seem to suggest that this is the case (refer table 8a).

The corporate class funds provide after fee returns which are 106 basis points higher than a similar trust fund. Hence, the investor more than recovers the extra 11 basis points paid in higher MER. Now, the extra return comes at an extra risk. For similar investment category, style, and other factors, corporate class funds invest in more risky investments. This is apparent from the differences in mean standard deviation for the two types of funds: the standard deviation for corporate class funds is 1.91% higher than trust funds. Therefore, it is important for the investor

to understand that when choosing between two equivalent funds, the corporate fund is likely to be more risky, even though both funds may have same investment category and investment style.

Thus, fund managers in trust fund act more conservatively as they have the additional responsibility of their fiduciary duties towards the investors. Hence, they may underperform due to being over-conservative and ultimately investing in a sub-optimal portfolio (Warburton, 2010). On the other hand, the fund managers in corporate class invest more optimally due to more the freedom and focus provided by their single role, and also due to lack of micromanagement by the board. One can also argue that the superior performance of corporate class funds as compared to trust funds is due to the former having better fund managers. However, since we control for fund manager level characteristics, this is not the case.

Discussion

Our results show that a rational investor, who seeks to maximize the return on his investment, and has no preferences in terms of structure of fund, should choose to invest through corporate class funds. We will demonstrate this by taking the example of a hypothetical investor wishes to invest $10,000 for a five year period. If he invests in an average trust fund, assuming a fee adjusted return of 5%, the amount available to investor at the end of year five will be $12,201 (refer Table b for calculations). If he invests in an equivalent corporate class fund, the fee adjusted return for this fund would be 6.06%, and the funds available to investor at the end of year five would be $12,601.

TABLE B: THIS TABLE SHOWS HOW AN INVESTMENT OF $10,000 WOULD GROW IN TWO EQUIVALENT FUNDS (DIFFERING ONLY IN TERMS OF LEGAL STATUS AND HENCE, FEE ADJUSTED RETURNS).

	Trust Fund	Corporate Class Fund
Initial investment ($)	10,000	10,000
Front end load ($)	245	370
Amount invested ($)	9,755	9,630
fee adjust return	5%	6.06%
Amount at the end of year five ($)	12,450	12,924
Back end load ($)	249	323
Amount available to investor ($)	12,201	12,601

Now, if the corporate funds are superior that trust funds do we expect the trust funds to become extinct anytime in the near future? That seems highly unlikely for a couple of reasons. First of all, Trust funds have been the traditional form of mutual funds in Canada and hence, the investors have a distinct level of familiarity and comfort while investing through trust funds. Corporate funds are new to Canada and most of the investors are not aware about the advantages of corporate funds. Secondly, financial advisor or broker plays a crucial role in choosing the mutual fund for their clients. Many large financial groups, with a very large advisor network, do not offer corporate funds. Hence, since the advisor may not have the incentive to promote corporate funds, the investor will not even be aware of having corporate funds as an option.

Now that we observe that investors are demonstrating an increasing preference for corporate class funds, we wish to provide a guide for the investors by extending the analysis further to analyze the impact of board structure on the fees and performance for corporate funds. Thus, we will be able to derive inferences about the type of board structure that is favorable for the investors.

6. Impact of board structure on fees and performance of corporate class funds

When an investor purchases a share of corporate class fund, he places his trust on the board of directors of the fund that it will effectively minimize the agency costs and ensure that investor's interests are protected at all times. Various components of board structure can affect the effectiveness of functioning of a board. As discussed earlier in the literature review, parameters like board size, CEO duality, board independence, director compensation, director ownership, and presence of unitary boards have been analyzed by various researchers.

Information regarding board size and presence of CEO duality is readily available from the Annual Information Form (AIF) filed at SEDAR by all fund companies. However, since the format for AIF is not standardized, the information has to be obtained by downloading and going through each AIF manually.

The Securities Exchange Commission (SEC), the mutual fund regulator in US, has emphasized a lot on board independence. In 2002, it passed a rule requiring funds to have at least

75% independent directors, up from the existing requirement of 50%. In Canada, no such law regarding the required minimum percentage of independent board members currently exists. Companies are required to provide the municipality of residence, current occupation and occupation during the last five years for each director. However, companies are not required to identify the independent or non-independent member. Still, very few companies (e.g. Fidelity Capital Structure Corp.) will declare the independence status of its directors, but largely it is up to the investor to research on the profile of each director, using the information provided in AIF, to determine if a director is independent or not.

The disclosure of director compensation, which is also mandatory in US since 2002, is not a mandatory practice in Canada as yet. Therefore, compensation data is not available for Canada. Likewise, disclosure of ownership stakes of directors is also not required in Canada, whereas it has been a requirement in US since 2001.

Establishment of a unitary board is a default mechanism for corporate class funds in Canada by design. Most fund families establish a single mutual fund corporation, under the umbrella of which all corporate class mutual funds are offered as different classes of shares of that corporation. Some families like Invesco Trimark Ltd have multiple mutual fund corporations, but they all share a common board. The only two families which are an exception to this are National Bank Mutual Funds and Franklin Templeton Investments. Thus, we don't have suitable sample size to analyze the impact of unitary board.

For these reasons, we will be looking at the impact of three board variables: board size, CEO duality, and board independence. Additionally, we will also be looking the impact of presence of women on board, measure by percentage of women on board, as measure of analyzing the impact of board diversity. Although, gender of the board members is not directly stated, it is possible to identify the gender of each of the board member by researching further on the profile (provided in AIF) of each board member.

If we look at table 9, which provides the summary statistics for governance data for corporate class funds, collected for a period of six years from 2005 to 2010. The average board has five directors. There is a lot of variation in board size with the board consisting of just one member at one end to a board consisting of 13 members on the other end. Also, we observed that for most of the families, board size and composition varies from year to year. The chief executive officer of the fund manager acted as the chairman of the board for 27% of the funds. The average board has two thirds of directors who are independent. Hence, even though there is currently no regulation

regarding the presence of independent directors, companies have been following this practice on their own. We found that about 26% of funds had less than 50% representation of independent members. Further, the average board is largely male dominated with percentage of female directors at only 13.5%.

We will be analyzing the impact of these four variables on fees as well as the performance of corporate class funds, with the aim of ultimately analyzing effectiveness of the board in performing its duties.

Results

Corporate Class Funds Fees Analysis

From the results obtained in our previous section, we see that even though corporate class funds charge higher fees than trust funds, there is still a preference for them due to superior returns. However, not all funds are created equal and some corporate class funds charge more than other funds. We will try to investigate if there is an association between board structure and fees. By identifying certain board characteristics associated with lower fees, after controlling for other factors, an investor can make a more informed choice about which funds to invest his money in.

Consistent with most of the existing literature on corporate governance as well as mutual fund governance[9], we find that a larger board is less effective and leads to higher fees. This effect is significant on three out of total four measures of fees (refer table 11, table 12, table 13, and table 14). It is interesting to note that management expense ratio is not affected by board size. Hence, the higher cost is not due to additional expenses incurred due to having larger number of board members. Instead, a large board is more likely to approve higher loads and hence, pushing the total shareholder cost up with each additional board member.

Continuing the trend observed in the previous section, when additional fiduciary responsibilities are given to the CEO, i.e. when he also acts as the chairman of the board, the

[9] See Yermack (1996), Tufano and Sevick (1997), Del Guercio et al. (2003), Kong and Tang (2008), and Cremers et al. (2009), etc. amongst others.

benefit of this arrangement is obtained in terms of lower fees for the investors. This effect is highly significant on all four measures. CEO duality is the most significant factor that can reduce the back end load for a fund. The CEO duality leads to the CEO acting as steward and bringing the total shareholder cost down by .24%.

Board independence also comes across as an important factor in determining whether the board will be an effective board. Higher representation of independent directors on the board leads to significantly lower MER and lower maximum front end load, leading to higher benefits for the investors in terms of lower total shareholder cost. In case of maximum back end load, the board independence seems to increase the load. However, the impact is not significant at 1% significance level. Also, the overall impact of higher board independence is favorable for the investors.

Improving the board diversity helps in lowering the back end load, at the same time, a more diverse board is likely to allow higher management expense ratios. However, the effect of board diversity becomes insignificant when we consider the total shareholder cost.

It is interesting to inquire if board structures that are likely reduce fees for investors are doing so at the cost of potential returns. However, if performance is not adversely affected by a similar structure, it would make the case for preferring funds with such board structures.

Corporate Class Funds Performance Analysis

The fees charged by the fund are not the only measure of effectiveness of board that investors are concerned about. The potential impact of any board structure on the performance of the funds will be very crucial to investors.

We find that a larger board is not only likely to allow higher fees, it also associated with inferior performance. Each additional member decreases the fee adjusted returns by .36% (refer table 14a). This affect is significant whether we measure the fees using MER or by using TSC (refer table 14b). Hence, a smaller board is more effective. It brings dual benefits to investors in form of lower fees and superior performance. The other three board variables do not have a significant impact on the performance.

7. Conclusion

This work provides first empirical analysis on the impact of governance mechanism and board structure in Canadian mutual funds industry. We find that corporate class funds, where the governance is driven by board of directors of the fund, charge significantly higher fees on all four measures of fees, i.e. management expense ratio, maximum front end load, maximum back end load, and total shareholder cost. However, corporate funds also offer superior fee adjusted returns than trust funds. Therefore, an informed rational investor should prefer to invest through corporate class funds. Further, we demonstrate that a smaller board, having the CEO acting as the board chairman and with more independent directors is desirable for corporate class funds as far as investors are concerned. Not only is such a board associated with lower fees, it also linked with superior performance due presence of a more independent board, while the three factors don't have a significant impact on the returns.

Our results on impact of presence of a board as consistent with Warburton (2010), who finds that corporate funds in Britain charge higher fees than their trust counterparts, also offering superior returns at the same time. By obtaining almost similar results in a different market like Canada, we contribute to the nascent existing literature on effectiveness of the board acting as an internal governance mechanism for mutual funds. Also, our results on impact of board size and board independence are consistent with existing mutual fund governance literature based largely on US data. Once again, we add value to the literature by analyzing a new country and confirming the presence of similar relationships in Canada. The results regarding the impact of CEO duality are consistent with the stewardship theory, where additional fiduciary duties make CEOs act as trusted stewards, prioritizing the investor interests over self-interests. The stewardship theme is also evident from the results obtained from studying the impact of presence of board. In absence of a board, the managers take up additional responsibility of protecting investor's interests and act as stewards leading to lower fees, although at the cost of sub-optimal investments.

The results obtained can offer useful advice to the investors. After an investor has decided upon the investment category and style that he wants to invest in, based on his objectives and risk appetite, one should prefer to invest through corporate class funds, where his net take away will be higher than his take away from investing in an equivalent trust fund. Also, amongst similar

corporate class funds, one should look for funds with smaller board, CEO duality, and higher representation of independent directors.

From a regulatory framework point of view, our study provides first empirical analysis of effectiveness of two parallel structures operating with the Canadian mutual fund industry. We demonstrate that smaller boards are more favorable for investors. Therefore, Canadian regulators can set precedence by setting an upper limit on number of board members. Also, we provide evidence that higher representation of independent members improves the effectiveness of the board. A minimum level of percentage of independent directors required on the board can be established through a regulation. Also, regulators should encourage CEO duality as a policy as this can beneficial for investors in form of lower fees. Also, disclosure of director compensation and director ownership should be made mandatory for all funds.

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Appendix

Table 1: Description of final sample used for analysis

Variable	Industry	Corporate Class Funds	Trust Funds
No. of Funds	26,202	7,180	19,022
Net Assets ($M)	4,782,975.5	299,067.6	4,483,907.9
Average Return (%)	5.46	7.27	4.82
Average MER (%)	2.19	2.40	2.11
Average TSC (%)	2.80	3.22	2.64

Table 1: The data is given for the sample period 2005-2010. Average return is net of management fees. Management Expense Ratio (MER) is defined as cost of managing the fund as a percentage of total net assets. It includes management fee, marketing and administrative costs, brokerage fees, trailer fees, and taxes. Total Shareholder Cost (TSC) includes MER and the annualized front end and back end loads, assuming a holding period of 5 years.

Table 2: Return and Fees for the mutual fund sample

Variable	N	Mean	Std. Dev.	Min	Max	Median
Panel A: Industry						
Return (%)	23159	5.46	20.84	-72.70	204.20	7.28
Management Expense Ratio (MER) (%)	22758	2.19	0.79	0.00	18.11	2.37
Max Front Load (%)	26206	2.79	2.55	0.00	9.00	5.00
Max Deferred Load (%)	26206	1.62	2.57	0.00	10.00	0.00
Total Shareholder Cost (TSC) (%)	22758	2.80	1.06	0.01	18.11	3.01
Panel B: Corporate Class Funds						
Return (%)	6021	7.27	22.60	-71.28	163.19	9.06
Management Expense Ratio (MER) (%)	6265	2.40	0.64	0.03	9.89	2.44
Max Front Load (%)	7180	3.70	2.26	0.00	9.00	5.00
Max Deferred Load (%)	7180	1.96	2.71	0.00	9.00	0.00
Total Shareholder Cost (TSC) (%)	6265	3.22	0.78	0.22	10.16	3.38
Panel C: Trust Funds						
Return (%)	17138	4.82	20.15	-72.70	204.20	6.63
Management Expense Ratio (MER) (%)	16493	2.11	0.82	0.01	18.11	2.34
Max Front Load (%)	19026	2.45	2.57	0.00	9.00	0.00
Max Deferred Load (%)	19026	1.49	2.50	0.00	10.00	0.00
Total Shareholder Cost (TSC) (%)	16493	2.64	1.11	0	18	3

Table 2: Panel A provides a summary statistics for fee adjusted returns and for the four measures of fees. Panel B and Panel C provide separate summary statistics for MF corporates and MF trusts, respectively. MER is defined as sum of management fee, marketing and administrative costs, brokerage fees, trailer fees, and taxes as a percentage of net assets of the fund. Front End Load is charged at the time of purchase of a fund. The maximum limit for front end load is set by the mutual fund company and the actual front end load charged is negotiable. It also depends upon the advisor's relation with the customer as well as the size and frequency of customer's transactions with the advisor. . Back end Load is charged at the time of redemption of the fund. The maximum limit for back end load is also set by the mutual fund company and the actual back end load charged is negotiable. Total shareholder cost is defined as the sum of annual management expense ratio and annualized front end and back end loads.

Table 3: Control Variables

Variable	N	Mean	Std. Dev.	Min	Max	Median
Panel A: All Industry						
Net Assets ($M)	20099	237.97	722.03	0.01	14,643.51	29.82
Family Net Assets ($M)	26025	32,684.9	38,275.9	4.0	162,450.5	22,526.7
No. of Funds in a Family	26206	183	157	1	557	134
Manager Tenure (years)	26049	6.09	5.09	1	61	5.00
Fund Turnover (%)	22277	61.5	256.8	0.0	9,600.0	12.0
Min Initial Investment ($)	23592	24,864	199,239	0	5,000,000	500
Standard Deviation	23145	12.02	8.16	0.00	77.73	10.79
NAV ($)	26206	13.00	14.50	0	777	10.44
Panel B: Corporate Class Funds						
Net Assets ($M)	5238	57.10	185.98	0.01	5,237.00	8.86
Family Net Assets ($M)	7131	33,051.0	28,412.1	16.6	162,450.5	31,466.3
No. of Funds in a Family	7180	269	170	1	557	236
Manager Tenure (years)	7117	4.84	4.17	1	59	4.00
Fund Turnover (%)	6389	64.1	366.9	0.0	9,600.0	9.0
Min Initial Investment ($)	6633	7,945	39,570	0	1,000,000	500
Standard Deviation	6020	13.43	7.88	0.00	77.73	12.23
NAV ($)	7180	11.42	7.36	0	109	10.43
Panel C: Trust Funds						
Net Assets ($M)	14861	301.72	822.98	0.01	14,643.51	45.01
Family Net Assets ($M)	18894	32,546.7	41,392.0	4.0	162,450.5	15,883.0
No. of Funds in a Family	19026	150	137	1	557	98
Manager Tenure (years)	18932	6.56	5.32	1	61	5.00
Fund Turnover (%)	15888	60.5	195.8	0.0	8,700.0	14.0
Min Initial Investment ($)	16959	31,481	233,356	0	5,000,000	500
Standard Deviation	17125	11.52	8.20	0.00	76.93	10.20
NAV ($)	19026	13.60	16.37	1	777	10.45

Table 3: Panel A provides a summary statistics of the control variables used in the study for the entire MF industry consisting of MF trusts as well as MF corporates. Panel B and Panel C provide separate summary statistics for MF corporates and MF trusts, respectively. The major observable differences in Panel B (Corporate Class funds) and Panel C (Trust funds) are Net Assets size, No. of funds in family, minimum initial investment, and standard deviation. However, in case of minimum initial investment, the median value is the same, indicating presence of higher number of trust funds targeting institutional investors.

Table 4: Management expense ratio regression results

	Management Expense Ratio					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board dummy	0.29	28.4	0.12	7.14	0.11	7.06
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Return t-1	-		0.00	6.98	0.00	2.09
RSP eligibility dummy	-		0.04	1.03	0.03	0.85
Log(fund size) t-1	-		0.03	7.78	0.02	6.88
Log (fund family size) t-1	-		-0.04	-7.14	-0.05	-10.80
Log (fund age) t-1	-		-0.11	-11.39	-0.05	-5.02
Log(funds in family) t-1	-		0.00	3.32	0.00	4.31
Log (manager tenure) t-1	-		-0.08	-9.09	-0.01	-1.44
Turnover t-1	-		0.00	6.40	0.00	1.86
Log(min initial investment)	-		-0.15	-35.38	-0.15	-35.69
Standard deviation t-1	-		0.03	29.56	0.01	6.50
Log (NAV) t-1	-		0.00	0.08	-0.01	-4.71
Index fund dummy	-		-1.21	-39.65	-1.23	-40.00
Intercept	2.11	330.04	3.38	51.72	3.62	42.20
N	22758		10629		10629	
Pseudo R^2	0.028		0.337		0.516	

Table 4: This table presents the results from regressing Management Expense Ratio (MER) on governance mechanism choice, i.e. organizing as a corporate or a trust fund. MER is defined as sum of management fee, marketing and administrative costs, brokerage fees, trailer fees, and taxes as a percentage of net assets of the fund. Board dummy is set to one for corporate funds which have a board of directors protecting the interests of shareholders; it is zero for trust funds where it the manager's fiduciary duty to prioritize the interest of investors. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 5: Maximum front end load regression results

	Max Front End Load					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board dummy	1.25	38.44	0.99	18.29	1.04	19.14
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Return t-1	-		0.00	0.92	0.00	-0.44
RSP eligibility dummy	-		2.32	15.70	2.27	14.64
Log(fund size) t-1	-		0.09	7.80	0.07	5.79
Log (fund family size) t-1	-		-0.26	-14.07	-0.27	-13.77
Log (fund age) t-1	-		-0.11	-3.03	-0.04	-0.97
Log(funds in family) t-1	-		0.01	32.99	0.01	33.35
Log (manager tenure) t-1	-		-0.05	-1.53	-0.02	-0.47
Turnover t-1	-		0.00	2.21	0.00	-0.38
Log(min initial investment)	-		-0.19	-15.04	-0.17	-13.18
Standard deviation t-1	-		0.00	0.45	-0.01	-1.59
Log (NAV) t-1	-		-0.01	-2.87	-0.01	-4.72
Index fund dummy	-		-2.36	-30.72	-2.29	-26.33
Intercept	2.45	131.64	3.60	15.80	2.84	8.65
N	26206		10770		10770	
Pseudo R^2	0.048		0.196		0.237	

Table 5: This table presents the results from regressing maximum front end load on governance mechanism choice, i.e. organizing as a corporate or a trust fund. Front End Load is charged at the time of purchase of a fund. The maximum limit for front end load is set by the mutual fund company and the actual front end load charged is negotiable. It also depends upon the advisor's relation with the customer as well as the size and frequency of customer's transactions with the advisor. Board dummy is set to one for corporate funds which have a board of directors protecting the interests of shareholders; it is zero for trust funds where it the manager's fiduciary duty to prioritize the interest of investors. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 6: Maximum back end load regression results

	Max Back End Load					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board dummy	0.47	12.75	1.18	17.27	1.31	19.79
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Return t-1	-		0.00	-4.14	-0.01	-2.73
RSP eligibility dummy	-		1.73	14.74	1.71	14.19
Log(fund size) t-1	-		0.01	0.69	0.00	0.25
Log (fund family size) t-1	-		0.10	5.29	0.10	5.08
Log (fund age) t-1	-		-0.08	-1.98	0.01	0.18
Log(funds in family) t-1	-		0.00	-31.22	-0.01	-29.14
Log (manager tenure) t-1	-		0.01	0.20	-0.04	-1.07
Turnover t-1	-		0.00	-8.17	0.00	-5.71
Log(min initial investment)	-		-0.18	-13.32	-0.20	-14.95
Standard deviation t-1	-		0.00	-0.90	-0.02	-3.82
Log (NAV) t-1	-		-0.01	-1.86	0.00	-1.40
Index fund dummy	-		-1.83	-23.95	-1.49	-17.03
Intercept	1.49	82.28	1.21	5.68	-0.63	-1.51
N	26206		10770		10770	
Pseudo R^2	0.007		0.094		0.152	

Table 6: This table presents the results from regressing maximum back end load on governance mechanism choice, i.e. organizing as a corporate or a trust fund. Back end Load is charged at the time of redemption of the fund. The maximum limit for back end load is set by the mutual fund company and the actual back end load charged is negotiable. It also depends upon the advisor's relation with the customer as well as the size and frequency of customer's transactions with the advisor. Also, back end loads have a declining structure where the load charged on redemption is highest in the first year and keeps decreasing in the subsequent years. We have assumed that it decreases by 1% every year from the initial maximum value. Board dummy is set to one for corporate funds which have a board of directors protecting the interests of shareholders; it is zero for trust funds where it the manager's fiduciary duty to prioritize the interest of investors. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 7: Total shareholder cost regression results

	Total Shareholder Cost					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board dummy	0.57	43.80	0.35	14.93	0.35	15.97
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Return t-1	-		0.00	6.06	0.00	1.38
RSP eligibility dummy	-		0.55	11.92	0.54	10.79
Log(fund size) t-1	-		0.04	9.28	0.04	7.71
Log (fund family size) t-1	-		-0.09	-12.47	-0.11	-14.86
Log (fund age) t-1	-		-0.13	-9.31	-0.06	-3.75
Log(funds in family) t-1	-		0.00	17.00	0.00	18.83
Log (manager tenure) t-1	-		-0.09	-7.02	-0.02	-1.41
Turnover t-1	-		0.00	5.89	0.00	0.64
Log(min initial investment)	-		-0.20	-33.85	-0.19	-33.49
Standard deviation t-1	-		0.03	22.47	0.01	3.89
Log (NAV) t-1	-		0.00	-1.25	-0.01	-5.12
Index fund dummy	-		-1.73	-42.04	-1.73	-40.52
Intercept	2.64	307.17	4.17	51.04	4.21	35.98
N	22758		10629		10629	
Pseudo R^2	0.058		0.325		0.455	

Table 7: This table presents the results from regressing total shareholder cost on governance mechanism choice, i.e. organizing as a corporate or a trust fund. Total shareholder cost is defined as the sum of annual management expense ratio and annualized front end and back end loads. Board dummy is set to one for corporate funds which have a board of directors protecting the interests of shareholders; it is zero for trust funds where it the manager's fiduciary duty to prioritize the interest of investors. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 8a: Performance regression results (using MER as a measure of fees)

	Performance Analysis					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board dummy	2.45	7.45	1.16	2.69	1.06	3.67
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Management Expense Ratio t-1	-		-4.75	-17.30	-1.80	-6.07
RSP eligibility dummy	-		1.65	1.97	-0.39	-0.61
Log(fund size) t-1	-		0.33	4.55	-0.01	-0.24
Log (fund family size) t-1	-		-0.34	-2.98	-0.09	-0.99
Log (fund age) t-1	-		-0.40	-1.75	0.46	2.53
Log(funds in family) t-1	-		0.01	5.23	0.00	3.25
Log (manager tenure) t-1	-		0.52	2.31	-0.10	-0.59
Turnover t-1	-		0.00	-3.57	0.00	2.36
Log(min initial investment)	-		0.05	0.61	-0.12	-1.71
Standard deviation t-1	-		1.40	49.88	1.15	21.22
Log (NAV) t-1	-		-0.19	-7.26	-0.09	-6.11
Index fund dummy	-		-7.49	-7.51	-0.96	-1.33
Intercept	4.82	31.32	-		-	
N	23159		10479		10479	
Pseudo R square	0.003		0.312		0.702	

Table 8a: This table presents the results from regressing fund's fee adjusted annual returns (adjusted for MER) on governance mechanism choice, i.e. organizing as a corporate or a trust fund. Board dummy is set to one for corporate funds which have a board of directors protecting the interests of shareholders; it is zero for trust funds where it the manager's fiduciary duty to prioritize the interest of investors. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 8b: Performance regression results (using TSC as a measure of fees)

	Performance Analysis					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board dummy	2.45	7.45	1.25	2.85	1.13	3.87
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Total Shareholder Cost t-1	-		-2.80	-16.37	-0.76	-5.02
RSP eligibility dummy	-		1.85	2.11	-0.04	-0.07
Log(fund size) t-1	-		0.38	5.15	-0.03	-0.47
Log (fund family size) t-1	-		-0.61	-5.36	-0.09	-0.90
Log (fund age) t-1	-		-0.47	-2.00	0.51	2.80
Log(funds in family) t-1	-		0.01	7.90	0.00	3.75
Log (manager tenure) t-1	-		0.66	2.89	-0.08	-0.48
Turnover t-1	-		0.00	-3.83	0.00	2.22
Log(min initial investment)	-		0.06	0.79	-0.01	-0.10
Standard deviation t-1	-		1.34	48.69	1.14	20.65
Log (NAV) t-1	-		-0.20	-7.67	-0.09	-5.96
Index fund dummy	-		-6.55	-6.66	-0.03	-0.05
Intercept	4.82	31.32	-		-	
N	23159		10479		10479	
Pseudo R square	0.003		0.302		0.701	

Table 8b: This table provides results for a robustness test conducted by using total shareholder cost to measure the fees instead of management expense ratio in table 8a. We obtain results which are very similar to the ones obtained earlier in table 8a. The dependent variable is same as before, i.e. fee adjusted annual returns for each fund. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 9: Summary Statistics for the Governance Data

Variable	Mean	Std. Dev.	Min	Max	Median
No of Directors	4.96	1.88	1	11	5.00
CEO Duality	0.27	0.44	0	1	0.00
% Independent Directors	60.08%	29.28%	0.00%	100.00%	66.67%
% Female Directors	13.50%	13.72%	0.00%	66.67%	12.50%

Table 9: This table provides summary statistics for the governance data that was manually collected for all corporate class mutual funds using their Annual Information Form (AIF) filed each year at SEDAR (accessible at www.sedar.com). CEO duality is a binary variable which is set to one when the chairman of board is also the chief executive officer of the fund. Percentage of independent board members is use the measure the level of outsider representation on board. The average board was found to be independent, i.e. percentage of independent members is greater than 50%. Percentage of female directors measures the diversity in board. A diverse board may facilitate a wider discussion and lead to a better execution of fee negotiation and management over-seeing functions of the board.

Table 10: Governance Structure: Management expense ratio regression

	Management Expense Ratio					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board size	0.02	4.76	-0.01	-0.84	0.00	0.49
CEO duality	-0.10	-4.17	-0.18	-5.01	-0.16	-4.31
Board independence	-0.19	-4.84	-0.14	-2.39	-0.17	-2.90
Board diversity	-0.41	-5.35	0.26	1.86	0.41	2.98
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Return t-1	-		0.00	4.38	0.01	2.64
RSP eligibility dummy	-		0.22	2.41	0.30	3.11
Log(fund size) t-1	-		0.01	0.98	0.02	2.48
Log (fund family size) t-1	-		-0.04	-2.35	-0.07	-3.56
Log (fund age) t-1	-		0.06	2.50	0.01	0.49
Log(funds in family) t-1	-		0.00	-3.18	0.00	-1.05
Log (manager tenure) t-1	-		-0.01	-0.39	0.03	1.51
Turnover t-1	-		0.00	4.19	0.00	1.38
Log(min initial investment)	-		-0.10	-9.25	-0.09	-7.86
Standard deviation t-1	-		0.03	13.65	0.01	3.13
Log (NAV) t-1	-		-0.01	-4.30	-0.01	-3.59
Index fund dummy	-		-0.56	-4.47	-0.67	-4.06
Intercept	2.49	69.36	2.98	24.39	3.20	22.89
N	6265		2636		2636	
Pseudo R square	0.020		0.237		0.394	

Table 10: This table presents the results from regressing Management Expense Ratio (MER) on four board variables. Board size is defined as the numbers of directors on the board. CEO duality is a dummy variable which is set to one for funds where the CEO also acts as the chairman of the board. Board independence is measured by percentage of independent directors on the board. Board diversity is measured by the percentage of women on the board. MER is defined as sum of management fee, marketing and administrative costs, brokerage fees, trailer fees, and taxes as a percentage of net assets of the fund. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 11: Governance Structure: Maximum front end load regression

	Max Front End Load					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board size	-0.01	-0.45	0.03	1.52	0.05	3.03
CEO duality	-0.10	-1.45	-0.49	-4.95	-0.40	-3.89
Board independence	0.76	8.53	-0.24	-1.51	-0.58	-3.54
Board diversity	1.89	9.05	-0.32	-1.02	-0.27	-0.84
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Return t-1	-		0.00	-1.02	0.00	-0.32
RSP eligibility dummy	-		1.39	5.83	1.18	4.69
Log(fund size) t-1	-		0.05	3.05	0.07	3.63
Log (fund family size) t-1	-		0.30	6.77	0.28	5.86
Log (fund age) t-1	-		0.18	2.64	0.04	0.48
Log(funds in family) t-1	-		0.00	1.73	0.00	5.81
Log (manager tenure) t-1	-		0.30	5.90	0.36	6.80
Turnover t-1	-		0.00	1.15	0.00	-0.43
Log(min initial investment)	-		0.06	2.27	0.11	4.00
Standard deviation t-1	-		0.00	0.97	0.01	0.68
Log (NAV) t-1	-		-0.02	-6.22	-0.02	-4.90
Index fund dummy	-		2.19	9.26	2.62	10.19
Intercept	3.05	35.82	-0.85	-2.52	-0.77	-2.02
N	7180		2656		2656	
Pseudo R square	0.020		0.261		0.316	

Table 11: This table presents the results from regressing maximum front end load on four board variables. Board size is defined as the numbers of directors on the board. CEO duality is a dummy variable which is set to one for funds where the CEO also acts as the chairman of the board. Board independence is measured by percentage of independent directors on the board. Board diversity is measured by the percentage of women on the board. Front End Load is charged at the time of purchase of a fund. The maximum limit for front end load is set by the mutual fund company and the actual front end load charged is negotiable. It also depends upon the advisor's relation with the customer as well as the size and frequency of customer's transactions with the advisor. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 12: Governance Structure: Maximum back end load regression

	Max Back End Load					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board size	0.40	25.3	0.20	9.38	0.20	9.08
CEO duality	-0.88	-10.16	-1.51	-12.90	-1.26	-10.52
Board independence	1.04	7.86	0.46	2.28	0.45	2.19
Board diversity	0.97	3.68	-1.96	-4.90	-2.56	-6.54
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Return t-1	-		-0.01	-4.33	0.00	-1.51
RSP eligibility dummy	-		0.76	3.61	0.70	2.94
Log(fund size) t-1	-		-0.04	-1.79	-0.02	-0.91
Log (fund family size) t-1	-		0.68	15.28	0.61	11.18
Log (fund age) t-1	-		0.21	2.69	0.23	2.61
Log(funds in family) t-1	-		-0.01	-34.75	-0.01	-25.68
Log (manager tenure) t-1	-		0.55	8.33	0.49	7.16
Turnover t-1	-		0.00	-8.29	0.00	-4.03
Log(min initial investment)	-		0.11	3.08	-0.01	-0.28
Standard deviation t-1	-		0.01	1.76	-0.01	-1.59
Log (NAV) t-1	-		-0.03	-8.95	-0.02	-3.60
Index fund dummy	-		-1.48	-3.02	-1.57	-2.79
Intercept	-0.53	-4.70	-4.32	-12.67	-4.93	-10.82
N	7180		2656		2656	
Pseudo R square	0.124		0.484		0.555	

Table 12: This table presents the results from regressing maximum back end load on four board variables. Board size is defined as the numbers of directors on the board. CEO duality is a dummy variable which is set to one for funds where the CEO also acts as the chairman of the board. Board independence is measured by percentage of independent directors on the board. Board diversity is measured by the percentage of women on the board. Back end Load is charged at the time of redemption of the fund. The maximum limit for back end load is set by the mutual fund company and the actual back end load charged is negotiable. It also depends upon the advisor's relation with the customer as well as the size and frequency of customer's transactions with the advisor. Also, back end loads have a declining structure where the load charged on redemption is highest in the first year and keeps decreasing in the subsequent years. We have assumed that it decreases by 1% every year from the initial maximum value. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 13: Governance Structure: Total shareholder cost regression

	Total Shareholder Cost					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board size	0.04	8.06	0.01	1.05	0.02	2.80
CEO duality	-0.08	-2.43	-0.29	-6.28	-0.24	-5.24
Board independence	-0.07	-1.5	-0.20	-2.81	-0.30	-4.13
Board diversity	-0.11	-1.15	-0.01	-0.07	0.14	0.85
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Return t-1	-		0.00	3.75	0.01	2.38
RSP eligibility dummy	-		0.49	5.03	0.54	5.21
Log(fund size) t-1	-		0.02	2.04	0.03	3.53
Log (fund family size) t-1	-		0.04	1.95	0.01	0.43
Log (fund age) t-1	-		0.10	3.19	0.02	0.72
Log(funds in family) t-1	-		0.00	-4.15	0.00	-0.13
Log (manager tenure) t-1	-		0.07	2.94	0.11	4.59
Turnover t-1	-		0.00	3.16	0.00	0.47
Log(min initial investment)	-		-0.09	-6.45	-0.07	-4.80
Standard deviation t-1	-		0.03	11.96	0.01	2.81
Log (NAV) t-1	-		-0.01	-6.50	-0.01	-5.66
Index fund dummy	-		-0.16	-1.02	-0.20	-1.08
Intercept	3.08	76.04	2.73	18.72	2.93	17.27
N	6265		2636		2636	
Pseudo R square	0.012		0.254		0.374	

Table 13: This table presents the results from regressing total shareholder cost on four board variables. Board size is defined as the numbers of directors on the board. CEO duality is a dummy variable which is set to one for funds where the CEO also acts as the chairman of the board. Board independence is measured by percentage of independent directors on the board. Board diversity is measured by the percentage of women on the board. Total shareholder cost is defined as the sum of annual management expense ratio and annualized front end and back end loads. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 14a: Governance Structure: Performance regression (using MER as a measure of fees)

	Performance Analysis (using MER)					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board size	-0.38	-2.27	-0.21	-1.14	-0.36	-2.85
CEO duality	1.64	2.12	-1.34	-1.55	-0.67	-1.02
Board independence	-7.23	-6.49	-6.26	-4.53	-2.00	-1.89
Board diversity	-2.01	-0.81	8.28	2.76	3.26	1.43
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Management Expense Ratio t-1	-		-6.11	-8.48	-1.68	-2.82
RSP eligibility dummy	-		2.54	1.53	0.26	0.21
Log(fund size) t-1	-		0.42	2.88	0.07	0.62
Log (fund family size) t-1	-		-0.48	-1.47	0.24	0.88
Log (fund age) t-1	-		-2.52	-4.41	-0.42	-0.96
Log(funds in family) t-1	-		0.01	6.62	0.00	1.16
Log (manager tenure) t-1	-		1.35	2.64	0.41	1.18
Turnover t-1	-		0.00	-1.12	0.00	1.14
Log(min initial investment)	-		0.92	5.57	0.19	1.32
Standard deviation t-1	-		1.52	25.43	1.12	13.46
Log (NAV) t-1	-		-0.12	-2.61	-0.12	-3.06
Index fund dummy	-		-11.47	-1.55	-5.53	-3.00
Intercept	13.41	12.36	-		-	
N	6021		2591		2591	
Pseudo R square	0.013		0.367		0.738	

Table 14a: This table presents the results from regressing fee adjusted returns (adjusted for MER) on four board variables. Board size is defined as the numbers of directors on the board. CEO duality is a dummy variable which is set to one for funds where the CEO also acts as the chairman of the board. Board independence is measured by percentage of independent directors on the board. Board diversity is measured by the percentage of women on the board. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.

Table 14b: Governance Structure: Performance regression (using TSC as a measure of fees)

	Performance Analysis (using TSC)					
	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Board size	-0.38	-2.27	-0.22	-1.19	-0.34	-2.74
CEO duality	1.64	2.12	-1.53	-1.74	-0.68	-1.04
Board independence	-7.23	-6.49	-5.55	-3.95	-1.99	-1.87
Board diversity	-2.01	-0.81	5.82	1.93	2.61	1.13
Year effect	No		No		Yes	
Investment category effect	No		No		Yes	
Investment style effect	No		No		Yes	
Total Shareholder Cost t-1	-		-4.63	-9.37	-1.07	-2.75
RSP eligibility dummy	-		3.29	1.98	0.26	0.20
Log(fund size) t-1	-		0.50	3.41	0.07	0.66
Log (fund family size) t-1	-		-0.31	-0.93	0.37	1.34
Log (fund age) t-1	-		-2.71	-4.75	-0.40	-0.92
Log(funds in family) t-1	-		0.01	6.23	0.00	1.10
Log (manager tenure) t-1	-		1.62	3.16	0.49	1.39
Turnover t-1	-		0.00	-1.31	0.00	1.10
Log(min initial investment)	-		0.81	4.90	0.25	1.81
Standard deviation t-1	-		1.47	25.93	1.10	13.33
Log (NAV) t-1	-		-0.14	-2.97	-0.12	-3.08
Index fund dummy	-		-9.49	-1.26	-4.60	-2.44
Intercept	13.41	12.36	-		-	
N	6021		2591		2591	
Pseudo R square	0.013		0.358		0.737	

Table 14b: This table provides results for a robustness test conducted by using total shareholder cost to measure the fees instead of management expense ratio in table 14a. We obtain results which are very similar to the ones obtained earlier in table 14a. The dependent variable is same as before, i.e. fee adjusted annual returns for each fund. The model is fitted using pseudo maximum likelihood estimation and all standard errors are robust at fund cluster level.